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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

NOGUEROLA, ALEXANDER STEPHAN

ART UNIT	PAPER NUMBER
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1795

NOTIFICATION DATE	DELIVERY MODE
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06/23/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No. 10/517,835	Applicant(s) EIDSNES ET AL.	
	Examiner ALEX NOGUEROLA	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32,34-43 and 47-84 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 32,34-43 and 47-84 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Applicant's amendment of April 17, 2009 does not render the application allowable as several new claim limitations appear to be unsupported by the original disclosure.

Status of the Rejections pending since the Office action of December 17, 2008

2. All previous rejections are withdrawn.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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4. Claims 32, 34-43, and 47-84 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

Applicant states, on page 10 of the Amendment of April 17, 2009 ("Amendment"),

Regarding amended claim 32, the basis for the modifications compared to previous claims 32 and 33 is as follows. The claim now requires the at least one conductive member to be "*disposed in said microchannel or forming at least a part of a wall of said microchannel*". Basis for this alternative feature is provided for example by the embodiment of Figure 13, as described at page 13 lines 4-5.

Page 13, lines 4-5 of the Examiner's electronic copy of the specification (dated December 15, 2004) describes Figure 8, not Figure 13. Figure 13 is described on page 13, lines 23-28 of the specification. While Figure 13 and page 13, lines 23-28 of the specification do support having at least one conductive member forming at least part of a wall of the microchannel, claim 32 also requires "the system having electrodes positioned on respective sides of said conductive member so as to apply an electric field to said member." As shown in Figure 13 and described on page 13, lines 23-28 of the specification the electrodes are between the walls and beyond the ends of the conductive members in the walls. So to have both at least one conductive member forming at least part of a wall of the microchannel and also electrodes positioned on respective sides of said conductive member so as to apply an electric field to said member is not supported by the original disclosure.

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Applicant states, on page 10 of the Amendment,

Claim 32 requires that the conductive member has "a specific geometrical shape so as to provide in the microchannel a surface of the member wherein the normal to the surface has a component parallel to and a component perpendicular to the direction of the electric field in said microchannel". Basis for this amendment is to be found on page 6 lines 13-16, for example.

Page 6, lines 13-16 of the specification and the surrounding lines do not mention the components of the electric field. Moreover, the Examiner has done a word search of the pre-grant publication of the application, US 2005/0230251 A1, and has not found a single occurrence of the words "perpendicular" or the synonymous "right angle".

Applicant states, on page 11 of the Amendment,

Claim 32 requires that the conductive member comprises a perm selective ion conducting material. Basis for this amendment is to be found in original claim 10 which stated that the conducting means may consist of an ionic conducting material, and more specifically at page 18 lines 15-16 which refers to a perm selective ion conducting material, with a perm selective cation conducting material being indicated as an optional feature. There is further basis at page 14 lines 11-12 and page 20 lines 21-22.

Original claim 10 lists ionic conducting material, but does not mention a perm selective ion conducting material. Page 18 of the specification does not mention any solid conducting material, although it does mention hydrolyzed or solvated ions. Page 14, lines 9-12 mentions a tubular ion-exchange membrane, which could be construed as a perm selective ion conducting material. However, as described in this passage and shown in corresponding Figure 16 the ion conducting material is in the form of tube and is between an outer concentric tubular electrode and an inner

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electrode, which may be a metal wire. This support for the perm selective ion conducting material does not appear consistent with other limitations of claim 32, such as “the conductive member having a specific geometrical shape so as to provide in the microchannel a surface of the member wherein the normal to the surface has a component parallel to and a component perpendicular to the direction of the electric field in said microchannel.”

Since claims 34-43, and 47-68 depend directly or indirectly from claim 32 they also have these new limitations that lack support.

Since for independent claim 69 the “[b]asis for the amended version of claim 69 is essentially the same as that explained above in relation to claim 32”, claim 69 and the claims that depend therefrom also lack support for the corresponding limitations in claim 32 discussed above.

To the extent that new independent claim 74 has the new limitations that also appear in claim 32 and lack support as discussed above claim 74 has new matter. Claim 74 also requires the conductive member to have a characteristic dimension which is at least 10 μm . Applicant cites page 14, lines 27-28 as support, but it appears that this should be page 15, lines 15-16 instead.

Applicant states, “Basis for new claim 78 is at page 14 lines 21-23.” It appears that this should instead be page 15, lines 8-11. However, this support is incompatible with the support of the conductive member comprising perm selective ion conducting member, which is page 14, lines 9-12 and Figure 16 because page 14, lines 9-12 and Figure 16 describe and show a cylindrical or at least tubular perm selective ion

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conducting member and page 15, lines 8-11, in regard to an angle within 30-60 degrees concerns conducting means in the shape of a plane.

Since claims 75-84 depend directly or indirectly from claim 74 they also have these new limitations that lack support.

5. Claim 83 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 83 is a method claim without at least one method step.

Claim Rejections - 35 USC § 101

6. Claim 83 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claim 83 is a method claim without at least one method step.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX NOGUEROLA whose telephone number is (571) 272-1343. The examiner can normally be reached on M-F 8:30 - 5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NAM NGUYEN can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Alex Noguera/
Primary Examiner, Art Unit 1795
June 17, 2009